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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,601	02/15/2002	Pengfei Wu	1823430.00121US1	1545
23483	7590	08/15/2008		
WILMERHALE/BOSTON 60 STATE STREET BOSTON, MA 02109			EXAMINER ANGEBRANNDT, MARTIN J	
			ART UNIT	PAPER NUMBER
			1795	
			NOTIFICATION DATE	DELIVERY MODE
			08/15/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

michael.mathewson@wilmerhale.com  
teresa.carvalho@wilmerhale.com  
sharon.matthews@wilmerhale.com

<p align="center"><b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b></p>	<p><b>Application No.</b> 10/077,601</p>	<p><b>Applicant(s)</b> WU ET AL.</p>	
	<p><b>Examiner</b> Martin J. Angebrannt</p>	<p><b>Art Unit</b> 1795</p>	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 8/4/08 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: none.  
Claim(s) objected to: none.  
Claim(s) rejected: 7 and 33-65.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_  
13. ☐ Other: \_\_\_\_\_.

/Martin J Angebrannt/  
Primary Examiner, Art Unit 1795

Continuation of 11. does NOT place the application in condition for allowance because: The difference between the invention of the instant application and that described in the Wu et al. paper is the Tg of the polymer binder. The higher Tg binder freezes out the motion of the azo dye. It is of record and well known that increasing the Tg of the polymeric binder increases the stability of the information recorded (see Natansohn et al and Hattner et al.) therefore the difference (the effect of merely using a higher Tg binder) cannot be said to be unappreciated or unexpected in the art. The difference between the instant invention and the invention in the Jager reference is the use of pendant azobenzene compounds in the Jager reference and a guest-host system in instant application. The grating of Jager is not limited to the surface relief generated by the reorientation, but also includes a polarization sensitive grating (the phase/relief grating would not be). The exposure processes in the Jager et al. and Wu et al references are the same and this presents a reasonable expectation of success in being able to record stable gratings, in addition to the transient gratings of Wu et al., There is also an expectation that the ability of the pendant azo chromophores in Jager et al. would be less able to reorient (reduced freedom of orientation) based upon them being attached to the polymer backbone. If the applicant can show an unexpected difference in the performance of the media of Wu et al. and the instant invention (ie an effect which would not be attributable to merely a higher Tg of the binder and perhaps a difference in performance over the process of Jager et al., allowable claims might be had. The argument that the reorientation is not taught fails to appreciate the teachings of the same exposure process in Wu et al and Jager et al., and the evidence of figure 4 of Jager et al.. The examiner notes that the equivalence of guest host and pendant azo chromophore systems in recording on the basis of reorientation and isomerization is clear from the evidence of Wu et al. and Jager et al., who use the same technique for exposure of these systems. The examiner notes that exposure apparatus illustrated in figures 1 and 12 of the instant application irradiated the blue light from both sides of the medium, while most of the references illuminate only from one. There may be a benefit from this beyond just increasing the exposure, but there is no evidence of this in the record at this time. The applicant may find that the exposure from both sides results in a benefit not realized in a similar exposure (at the same intensity) only from one side. The applicant may submit such EVIDENCE in a proper declaration and amend the claims to obviate the rejections at hand. The applicant argues that the non-volatile nature is not due to merely to the Tg, but have not provided any EVIDENCE to support this position. The applicant could do this by adding a plasticizer to the PVA used in the inventive composition until it has the Tg of the PMMA used in the Wu et al. references (Wu et al. Appl. Phys. Lett., 70(10) 1224 teaches it to have a MW of 101,000, as opposed to the 125,000-186,000 of the PVA used in the instant application and include a disclosure of the Tg of the PMMA used in the declaration. It may be that the showing is limited to the PVA and then the claims would have to be amended to be commensurate with this. The arguments that the references are non-analogous is without merit and the isomerization of the azobenzene in the underlying theme in each of these and the Wu et al., Jager et al., Hattner et al and Natansohn et al. all uses this to form holographic gratings.